

What is claimed is:

1. A host processing device for reproducing compressed audio data, comprising:
a body;
5 a memory slot formed in a side of an upper end of the body to accommodate a specific external storage medium;
command input means for instructing the host processing device to execute a specific operation; and
a system control module for controlling an operation of the host processing
10 device, the system control module comprising:
a digital interface unit adapted to communicate with the external storage medium through a port formed on an inside end of the memory slot and interface the audio data according to a certain digital interface communication standard,
a processing module for processing a command signal applied from the command
15 input means and controlling the host processing device to perform an operation corresponding to the command signal, and requesting the audio data from the external storage medium, receiving the audio data and applying the received audio data to a certain path,
a memory unit for storing a program for performing a system operation of the
20 host processing system, and
a decoder unit equipped therein with a buffer to delay a transmission rate and adapted to decode the audio data under the control of the processing module.

2. The host processing device as set forth in claim 1, wherein the specific external
25 storage medium is a USB flash disk and the port is a USB port.

3. A host processing device using an external storage medium, comprising:
a medium access module for accessing the external storage medium through a certain digital transmission medium and providing an access to the external storage
30 medium;

a signal processing module for decoding media data according to a certain first signal processing method;

a processing module for controlling an operation of the host processing device; and

5 a system memory module for providing a memory space for the operation of the host processing device controlled by the processing module;

wherein, when the processing module connects with the external storage medium, the processing module accesses the external storage medium, reads first file information of one or more media files stored in the external storage medium, and positions the first
10 file information in the system memory module;

wherein, when the processing module receives a command to select a specific one of the media files, the processing module searches for and reads data of the selected media file on the external storage medium through the medium access module based upon the first file information positioned on the system memory module, and provides
15 the read media data to the signal processing module to be decoded according to the first signal processing method.

4. The host processing device as set forth in claim 3, wherein, when the processing module receives the command to select the specific one of the media files stored in the
20 external storage medium, the processing module performs a media file decoding process, the media file decoding process comprising the steps of:

searching for the selected media file on the external storage medium based upon the first file information positioned on the system memory module;

loading the data of the searched media file onto the system memory module; and

25 providing the data of the searched media file loaded onto the system memory module to the signal processing module to be decoded according to the first signal processing method.

5. A host processing device using an external storage medium, comprising:

30 a medium access module for accessing the external storage medium through a

certain digital transmission medium and providing an access to the external storage medium;

a signal processing module for decoding media data according to a certain first signal processing method;

5 a user interface module for providing an interface to a user of the host processing device;

a processing module for controlling an operation of the host processing device; and

10 a system memory module for providing a memory space for the operation of the host processing device controlled by the processing module;

wherein, when the processing module connects with the external storage medium, the processing module accesses the external storage medium through the medium access module, reads first file information of one or more media files stored in the external storage medium, and displays the media files on the user interface module stored in the
15 external storage medium based upon the read first file information;

wherein, when the processing module receives a command to select a specific one of the media files, the processing module accesses the external storage medium through the medium access module, searches for the selected media file, loads data of the searched file data onto the system memory module, and provides the file data loaded onto
20 the system memory module to the signal processing module to be decoded according to the first signal processing method.

6. The host processing device as set forth in claim 3 or 5, wherein the first file information of the media file includes descriptor information of the media file.

25

7. The host processing device as set forth in claim 4 or 5, wherein, while the data of the selected media file provided to the signal processing module are decoded, the processing module performs a media file preloading process in a background fashion with respect to the decoding process for the selected media file, the media file preloading
30 process comprising the steps of:

determining a media file to be processed after the selected media file;
searching for the determined media file on the external storage medium based
upon the first file information positioned on the system memory module; and
loading data of the searched media file onto the system memory module.

5

8. The host processing device as set forth in claim 4 or 5, wherein the medium
access module is constructed to set an access mode thereof to an activated mode and a
non-activated mode requiring low power consumption under a control of the processing
module, and when the processing module accesses the external storage device, the
10 processing module sets the access mode to the activated mode before the access and the
access mode to the non-activated mode after the access.

9. The host processing device as set forth in claim 3 or 5, wherein, when the
processing module reads data of the media file stored in the external storage medium, the
15 processing module determines whether the media file has been secured through a security
measure, if the media file has not been secured, searches for the data of the media file on
the external storage medium according to a known file search method, and, if the media
file has been secured, obtains a first value regarding a physical location of the media file
on the external storage medium from the second file information of the media file,
20 obtains a second value corresponding to the first value according to a second
transformation rule in which an inverse function F^{-1} with respect to a function F
corresponding to a first transformation rule, which is used to secure the media file, exists,
and searches for the data of the media file on the external storage medium based upon the
second value.

25

10. The host processing device as set forth in claim 9, wherein the second file
information of the media file includes a File Allocation Table (FAT) for the media file.

11. The host processing device as set forth in claim 3 or 5, further comprising an
30 information sourcing module for sourcing a signal,

wherein the signal processing module further performs a process of encoding the input signal into media data according to a certain second signal processing method,

wherein, when the processing module receives an encoding command, the processing module transmits the signal provided from the information sourcing module to the signal processing module to be encoded into media data according to the second
5 signal processing method, constructs a media file from the encoded media data and positions the media file on the system memory module, and copies the constructed media file to the external storage medium through the medium access module if the external storage medium can be accessed through the medium access module.

10

12. The host processing device as set forth in claim 11, wherein, when a size of media data produced by the encoding of the signal processing module reaches a certain first critical value, the processing module constructs a media file from the produced media data, positions the produced media data on the system memory module and copies the
15 constructed media file from the system memory module to the external storage medium through the medium access module.

13. The host processing device as set forth in claim 11, wherein the information sourcing module comprises a tuner module for generating a tuning signal by tuning a
20 high frequency radio signal, a microphone module for generating a microphone signal in response to external sound, and a switching module for selecting one output signal from a plurality of input signals including the tuning and microphone signals, and

wherein the information sourcing module sources the output signal selected by the switching module to the signal processing module.

25

14. The host processing device as set forth in claim 3 or 5, wherein the digital transmission medium is a known USB medium, and the medium access module connects with the external storage medium through the USB medium and operates in a known host mode.

30

15. The host processing device as set forth in claim 3 or 5, wherein the digital transmission medium is a known IEEE1394 medium, and the medium access module connects with the external storage medium through the IEEE1394 medium and operates in known Serial Bus Protocol 2 initiator mode.

5

16. The host processing device as set forth in claim 3 or 5, wherein the external storage medium includes an independent external storage device.

17. The host processing device as set forth in claim 3 or 5, wherein the external
10 storage medium includes a non-volatile memory module embedded in a mobile communication device, and the host processing module connects with the mobile communication device through the medium access module and accesses the memory module.

15 18. The host processing device as set forth in claim 3 or 5, wherein the external storage medium includes a recording medium being read in a recording medium reading device, and the host processing module connects with the recording medium reading device through the medium access module and accesses the recording medium being read in the recording medium reading device.

20

19. The host processing device as set forth in claim 3 or 5, further including user interface means for providing an interface to a user of the host processing device in an integral fashion,

wherein the digital transmission medium is formed of a cable, and the host
25 processing device and the external storage medium are connected to each other through the cable.